

In the claims:

Claims 1 -6 (Canceled)

7. (Previously presented) The hydrophilic polypeptide of *Eimeria* comprising an amino acid sequence that shares at least 70% homology with a sequence selected from the group consisting of SEQ ID NO:1, SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:5 and SEQ ID NO:6.

8. (Previously presented) A hydrophilic polypeptide of *Eimeria tenella*, comprising an amino acid sequence that shares at least 70% homology with a sequence selected from the group consisting of SEQ ID NO:1, SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:5 and SEQ ID NO:6.

9. (Previously presented) An isolated DNA fragment comprising a nucleotide sequence encoding a hydrophilic polypeptide or an immunogenic fragment of said polypeptide according to claim 7.

10. (Previously presented) The DNA fragment according to claim 9, which comprises a nucleic acid sequence as depicted in SEQ ID NO: 39 or a fragment thereof.

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11. (Previously presented) The DNA fragment according to claim 9, which comprises a nucleic acid sequence as depicted in SEQ ID NO: 40 or a fragment thereof.

12. (Previously presented) The DNA fragment according to claim 9, which comprises a nucleic acid sequence as depicted in SEQ ID NO: 41 or a fragment thereof.

13. (Previously presented) A recombinant DNA molecule comprising a DNA fragment according to claim 9.

14. (Previously presented) A live recombinant carrier comprising a DNA fragment according to claim 9.

15. (Previously presented) A host cell comprising a DNA fragment according to claim 9.

16. (Currently amended) A vaccine for the protection of poultry against *Eimeria* infection, comprising at least one immunogen selected from the group consisting of

a hydrophilic polypeptide according to ~~claim 7,~~

~~an isolated DNA fragment comprising a nucleotide sequence encoding a hydrophilic polypeptide or an immunogenic fragment of said polypeptide according to claim 7,~~

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~~a recombinant DNA molecule comprising said DNA fragment;~~
~~a live recombinant carrier comprising said DNA fragment or~~
~~recombinant DNA molecule; and~~

~~a host cell comprising said DNA fragment, said recombinant~~
~~DNA molecule or said live recombinant carrier; comprising an~~
amino acid sequence that shows at least 70% homology with the
sequence of SEQ ID No:3

and a pharmaceutically acceptable carrier.

17. (Previously presented) The vaccine according to claim 16,
which additionally comprises an adjuvant.

18. (Previously presented) The vaccine according to claim 16,
which comprises an at least one additional immunogen of a poultry
pathogen.

19. (Previously presented) The vaccine according to claim 18,
wherein the at least one poultry pathogen is selected from the
group consisting of Marek's Disease virus (MDV), Newcastle
Disease virus (MDV), Infectious Bronchitis virus (IBV), Chicken
Anaemia Agent (CAA), Reovirus, Avian Retrovirus, Fowl Adenovirus,
Turkey Rhinotracheitis virus, *Salmonella* spp. and *E. coli*.

20. (Previously presented) The vaccine according to claim 16
which is in freeze-dried form.

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21. (Previously presented) An antibody raised against a polypeptide according to claim 7.

22. (Previously presented) A method for the preparation of antibodies against a polypeptide according to claim 3, which comprises administering said polypeptide to a suitable animal.

23. (Canceled)

24. (Previously presented) A method for the preparation of a vaccine for combatting *Eimeria* infections, comprising admixing antibodies according to claim 21 with a pharmaceutically acceptable carrier.

25. (Previously presented) A method for the detection of *Eimeria* parasites in poultry, comprising incubating a DNA preparation from the poultry with a DNA fragment according to claim 9, whereby the detection of hybrids is indicative of the presence of *Eimeria* in the DNA preparation.

26. (Previously presented) A method for the detection of antibodies against *Eimeria* parasites in poultry serum, comprising incubating said serum with the hydrophilic polypeptide according to claim 7, whereby the formation of a complex between the

polypeptide and antibodies in the serum indicates a positive result.

27. (Previously presented) A live recombinant carrier comprising a recombinant DNA molecule according to claim 13.

28. (Previously presented) A host cell comprising a recombinant DNA molecule according to claim 13.

29. (Previously presented) A host cell comprising a live recombinant carrier according to claim 14.